

## IUBMB Enzyme Nomenclature

**EC 3.5.5.1**

**Common name:** nitrilase

**Reaction:** A nitrile + H<sub>2</sub>O = a carboxylate + NH<sub>3</sub>

**Other name(s):** acetonitrilase; benzonitrilase

**Systematic name:** nitrile aminohydrolase

**Comments:** Acts on a wide range of aromatic nitriles including (indole-3-yl)-acetonitrile, and also on some aliphatic nitriles, and on the corresponding acid amides. *cf.* [EC 4.2.1.84](#) nitrile hydratase.

**Links to other databases:** [BRENDA](#), [EXPASY](#), [KEGG](#), [UM-BBD](#), [WIT](#), CAS registry number: 9024-9-2

**References:**

1. Harper, D.B. Microbial metabolism of aromatic nitriles. Enzymology of C-N cleavage by *Nocardia* sp. (*rhodochrous* group) N.C.I.B. 11216. *Biochem. J.* 165 (1977) 309-319. [Medline UI: [78039839](#)]
2. Thimann, K.V. and Mahadevan, S. Nitrilase. I. Occurrence, preparation, and general properties of the enzyme. *Arch. Biochem. Biophys.* 105 (1964) 133-141.

[EC 3.5.5.1 created 1965, modified 1989]

---

[Return to EC 3.5.5 home page](#)

[Return to EC 3.5 home page](#)

[Return to EC 3 home page](#)

[Return to Enzymes home page](#)

[Return to IUBMB Biochemical Nomenclature home page](#)